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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,603	02/11/2004	Michael Hutton	306812005800	4958

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EXAMINER

CHO, JAMES HYONCHOL

ART UNIT	PAPER NUMBER
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2819

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/777,603	Applicant(s) HUTTON ET AL.	
	Examiner James H. Cho	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 and 14-21 is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings were received on 11/29/2006. These drawings are approved.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Lytle et al. (US PAT No. 6,492,834).

Regarding claim 9, Fig. 6 of Lytle et al. teaches a programmable logic device (PLD) including: at least first and second logic array blocks, LABs (LAB comprising a column of LE 300 on the left side, first LAB, hereinafter, LAB comprising a column of LE 300 on the right side, second LAB, hereinafter); at least first and second logic array blocks (LABs), the first LAB including a first plurality of logic elements (LEs 300) and the second LAB including a second plurality of LEs (first and second LAB comprising LEs 300); a plurality of first signal lines capable of driving at least one of the second plurality of LEs (signal lines driving LEs of the second LAB including 504); a plurality of output lines (output lines of the first LAB) driven by at least one of the first plurality of LEs; and a first swap multiplexer, MUX (INPUT MUX REGION 504 on the left side, MUX, hereinafter) having a first selectable input capable of being driven by at least one of the

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plurality of output lines (504 on the left side, MUX hereinafter, receives inputs from the outputs from LEs of the first LAB) and a second selectable input capable of being driven at least one of the plurality of first signal lines (first signal lines driving second LAB coupled to MUX via GH210), and an output capable of driving the at least first LAB (outputs of MUX drives LEs of the first LAB).

Regarding claim 10, Fig. 6 of Lytle et al. teaches the PLD of claim 9 wherein the first LAB includes a plurality of local lines which drives the first plurality of LEs (lines coupled to inputs of LEs of the first LAB) and the output of the first swap MUX drives at least one of the plurality of local lines (local lines coupling output of MUX to inputs of LEs of the first LAB).

Regarding claim 11, Fig. 6 of Lytle et al. teaches the PLD of claim 10 wherein the plurality of first signal lines include a plurality of LAB lines at least one of which drives the second LAB (inputs of LEs of the second LAB driven by lines from 504) and a plurality of tap lines at least one of which is interconnected with at least one of the plurality of LAB lines (part of GH210 interconnected with input lines of LEs via 504), at least one of the plurality of tap lines driving the first selectable input of the first swap MUX (part of GH 210 connected to the inputs of MUX).

Regarding claim 12, Fig. 6 of Lytle et al. teaches the PLD of claim 11, Fig. 8 of Lytle et al. further includes at least a third LAB and a plurality of second signal lines (signal lines for the bottom LAB 200) capable of driving the third LAB where the first swap MUX includes a third selectable input and at least one of the second signal lines

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drives the third selectable input (inputs of IMR 504 being coupled to a third LAB 200 via GV220 and programmable connection 808).

Allowable Subject Matter

Claims 1-8 and 14-21 are allowable over the prior art of record.

Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Although Lytle et al. teaches a PLD with highly routable interconnect, one of ordinary skill in the art would not have been motivated to modify the teaching of Lytle et al. to further includes, among other things, the specifics of the swap mux having a first set of selectable inputs directly coupled to the outputs of the first LAB, a second set of inputs directly coupled to the inputs of the second LAB and the output of the swap mux driving the first LAB (claims 1 and 14) and the specifics of the plurality of tap lines include a first set of tap lines and a second set of tap lines, at least one of the first set of tap lines capable of driving the first selectable input of the first swap MUX and at least one of the second set of tap lines capable of driving the second selectable input of the second swap MUX (claim 13).

Response to Arguments

Applicant's arguments filed 11/13/2006 have been fully considered but they are not persuasive. The applicant's whole argument is based on the fact that the Lytle reference fails to teaches the swap mux having a first set of selectable inputs directly

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coupled to the outputs of the first LAB, a second set of inputs directly coupled to the inputs of the second LAB and the output of the swap mux driving the first LAB.

However, the examiner notes that claims 9-12 has no such limitations having direct connections between the inputs of swap mux and outputs of the first LAB and the inputs of the second LAB. Therefore, Figure 6 of Lytle teaches all claim limitation as stated above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Cho whose telephone number is 571-272-1802. The examiner can normally be reached on M-F 6:30 AM - 3:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



James H Cho
Primary Examiner
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